Bismuth Sulfite Agar

Medium used for the identification and determination of *Salmonella* spp., particularly *Salmonella typhimurium* from food and clinical specimens.
*Equally use with NIER (MB-B1301N).

• CONTENTS (Liter)

Peptone	10.0 g
Beef Extract	5.0 g
Dextrose	5.0 g
Disodium Phosphate	4.0 g
Ferrous Sulfate	0.3 g
Bismuth Sulfite Indicator	8.0 g
Brilliant Green	0.025 g
Agar	20.0 g

Final pH = 7.6 ± 0.2 at 25°C

• PROCEDURE

Suspend 52.33 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. DO NOT AUTOCLAVE. Cool to 45 - 50°C in water bath. Pour into petri dishes. Evenly disperse the precipitate when dispensing. Prepared medium should be used within 4 days.

• INTERPRETATION

Bismuth Sulfite Agar is a medium used for the identification and determination of *Salmonella* spp., particularly *Salmonella typhimurium* from food and clinical specimens. Peptone and beef extract provide sources of nitrogen, carbon, and vitamins required for organism growth. Dextrose is the carbohydrate. Disodium phosphate is the buffering agent. Ferrous sulfate is used for the determination of H_2S production. Bismuth sulfite indicator and brilliant green are selective agents for the inhibition of Gram-positive bacteria and coliforms. Agar is the solidifying agent.

• TECHNIC

Inoculate the specimen using a sterile loop to the medium. Incubate at 35 ± 2°C for 24 - 48 hours. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium
Appearance: free-flowing, homogeneous
Color: light green
Prepared medium
Appearance: opaque, may have slight precipitates
Color: pale green
Incubation conditions: 35 ± 2°C / 24 - 48 hours

Microorganism	ATCC	Inoculum CFU	Growth	Characteristics
Salmonella enteritidis	NCCP 12236	10^2-10^3	good	black colonies with sheen
Salmonella typhimurium	14028	10^2-10^3	good	black colonies with sheen
Escherichia coli	25922	≥10^3	partially inhibited	green to brown colonies
Enterococcus faecalis	29212	≥10^3	inhibited	-

• STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label. Store prepared medium at 2 - 8°C. Prepared medium should be used within 4 days.

• REFERENCES

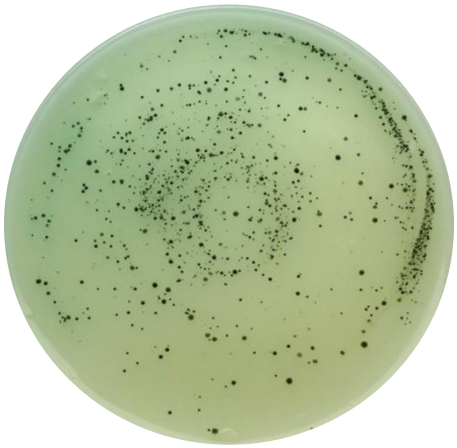
1. American Public Health Association: Compendium of methos for Microbiological Examination of Foods. 3rded., 1992.
2. McCoy, J.H.: The isolation of Salmonellae. J.Appl.Bact., 25; 213-224 (1962).
3. Unites States Pharmacopoeia XXIII, Chapter "Microbial Limit Tests", 1995.
4. Wilson, W.J., a Blair, E.M. McV.: Further experience of the bismuth sulfite media in the isolation of Bacillus typhosus and Bacillus paratyphosus B from faeces, sewage and water. J.Hyg. 31; 138-161 (1931).
5. Refer to the NIER.

• PACKAGE

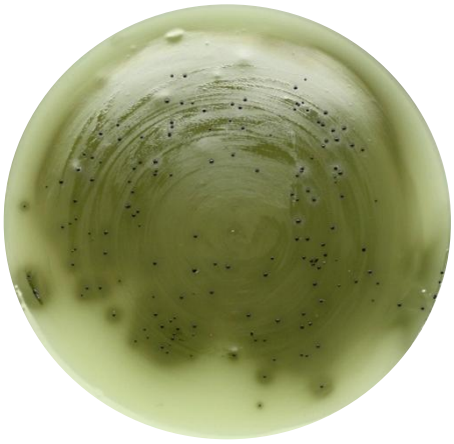
Cat. No : MB-B1301 Bismuth Sulfite Agar	500 G

• MICROBIAL CULTURE IMAGES

None



Escherichia coli ATCC 25922



Salmonella typhimurium ATCC 14028

Incubation conditions : 35 ± 2℃ 24 - 48 hours

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